SEQUENCE LISTING

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<110> Fronticelli, Clara
<120> Polymeric Hemoglobin Mutants
<130> 6056-279 PC
<140> PCT/US99/22756
<141> 2000-05-01
<150> 60/102,640
<151> 1998-10-01
<160> 12
<170> FastSEQ for Windows Version 4.0
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aaggeteatg geaagaaagt geteggtgee tttagtgatg geetggetea eetggaeaac 240
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<212> DNA
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<223> Description of Artificial Sequence: Mutant Of
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ttetttgagt cetttgggga tetgteeact eetgatgetg ttatgggeaa eeetaaggtg 180
aaggeteatg geaagaaagt geteggtgee tttagtgatg geetggetea eetggacaae 240
ctcaagggca cctttgccac actgagtgag ctgcatgctg acaagctgca cgtggatcct 300
gagaacttca ggctcctggg caacgtgctg gtcggtgtgc tggcccatca ctttggcaaa 360
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<213> Human
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Val His Leu Thr Pro Glu Glu Lys Ser Ala Val Thr Ala Leu Trp Gly
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Lys Val Asn Val Asp Glu Val Gly Glu Ala Leu Gly Arg Leu Leu
Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
                           40
Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
                        55
Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
                                     , 75
                   70
Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys Leu
                                   90
                85
His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Cys
                                105
Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln Ala
                            120
Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His Lys
   130
                        135
Tyr His
145
<210> 4
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      Human beta-globin
<400> 4
Val His Leu Thr Pro Glu Glu Lys Cys Ala Val Thr Ala Leu Trp Gly
Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu
                                25
Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
                            40
Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
                        55
                                            60
Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
                                        75
                    70
Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Ala Asp Lys Leu
                                    90
His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Gly
                                105
            100
Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln Ala
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Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His Lys

140

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Tyr His
145
<210> 5
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<400> 5
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Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp Leu
Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala Asp
Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala Leu
Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro Val
Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala His
                                105
Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys Phe
                           120
Leu Ala Ser Val Ser Thr Val Leu Thr Ser Lys Tyr Arg
   130
                       135
<210> 6
<211> 141
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     Human Alpha-globin
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Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg Met
                                25
Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp Leu
Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala Asp
Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala Leu
Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro Val
                                    90
Asn Phe Lys Leu Leu Ser His Ser Leu Leu Val Thr Leu Ala Ala His
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135

130

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Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys Phe
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Leu Ala Ser Val Ser Thr Val Leu Thr Ser Lys Tyr Arg
    130
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<210> 7
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gctggcgagt atggtgcgga ggccctggag aggatgttcc tgtccttccc caccaccaag 120
acctacttcc cgcacttcga cctgagccac ggctctgccc aggttaaggg ccacggcaag 180
aaggtggccg acgcgctgac caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg 240
teegeeetga gegaeetgea egegeaeaag ettegggtgg aceeggteaa etteaagete 300
ctaagccact coetgetggt gaccetggcc gcccacetec cegeegagtt cacceetgeg 360
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cgt
<210> 8
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1
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<210> 10
<211> 27
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<212> DNA

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<400> 10
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<210> 11
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<223> Description of Artificial Sequence: Mutagenizing
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      mutation
<400> 11
                                                                   18
cagcacaccg accagcac
<210> 12
<211> 423
<212> DNA
<213> Human
<400> 12
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acctacttcc cqcacttcga cctgagccac ggctctgccc aggttaaggg ccacggcaag 180
aaggtggccg acgcgctgac caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg 240
tecquetqa quaectqua eguquacaag ettegggtgg acceggteaa etteaagete 300
ctaagccact geetgetggt gaccetggee geecacetee eegeegagtt cacceetgeg 360
gtgcacgcct ccctggacaa gttcctggct tctgtgagca ccgtgctgac ctccaaatac 420
cgt
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